

CSF2RB Human

GM-CSF Receptor Beta Human Recombinant

GRF0017

Product Overview

Name	CSF2RB Human
Accession(Primary)	P32927
Immunogen	Anti-human CSK mAb, is derived from hybridization of mouse F0 myeloma cells with spleen cells from BALB/c mice immunized with recombinant human CSK amino acids 1-450 purified from E. coli.
Description	GM-CSF Receptor Beta Human Recombinant

Target information (P32927)

Gene Name

About Gene Symbol

Background

Title: GM-CSF Receptor Beta Human Recombinant: A Key Receptor in Immunological Research Abstract: Granulocyte-macrophage colony-stimulating factor receptor beta (GM-CSF R β) is a crucial receptor involved in immune cell development and function. This research paper provides a comprehensive analysis of human recombinant GM-CSF R β , focusing on its production, characterization, and applications in immunological research. The paper discusses the significance of GM-CSF R β in immune cell signaling and its role in various immune-related disorders. Furthermore, it elucidates the potential therapeutic implications of recombinant GM-CSF R β in immunotherapy and highlights ongoing research in the field. The information presented in this paper aims to enhance the understanding of human recombinant GM-CSF R β and its utility as a research tool in immunological studies. Introduction:

Granulocyte-macrophage colony-stimulating factor receptor beta (GM-CSF R β) is a high-affinity receptor that binds to granulocyte-macrophage colony-stimulating factor (GM-CSF). It plays a critical role in immune cell development, differentiation, and activation. Human recombinant GM-CSF R β , produced through genetic engineering techniques, enables researchers to investigate its biological functions and therapeutic potential. Production and Characterization: Recombinant GM-CSF R β is typically produced using expression systems such as mammalian cells or bacteria. The protein is then purified and characterized to ensure its structural integrity and functional activity. Quality control measures are implemented to confirm the specificity and binding affinity of the recombinant receptor. Immunological Significance: GM-CSF R β is expressed on various immune cells, including myeloid cells, dendritic cells, and macrophages. It plays a crucial role in cell signaling pathways, promoting cell proliferation, survival, and activation. The dysregulation of GM-CSF R β signaling has been implicated in autoimmune diseases, inflammatory disorders, and hematological malignancies. Recombinant GM-CSF R β provides a valuable tool for investigating these immune-related processes and deciphering the underlying mechanisms. Therapeutic Implications: The dysregulation of GM-CSF R β signaling in immune-related disorders has prompted the exploration of recombinant GM-CSF R β as a potential therapeutic target. Targeted therapies, such as monoclonal antibodies and small-molecule inhibitors, are being developed to modulate GM-CSF R β signaling and restore immune homeostasis. Ongoing research focuses on optimizing these therapeutic approaches and identifying novel treatment strategies. Conclusion: Human recombinant GM-CSF R β is a critical research tool in the field of immunology. Its production, characterization, and applications in immune cell signaling contribute to our understanding of immune responses and the development of novel therapeutics. Continued research and advancements in GM-CSF R β -based immunotherapy hold promise for improving treatment outcomes in various immune-related disorders.

References for protein:

Bibliography: Hamilton, J. A. (2008). GM-CSF signaling in macrophages: Insights from gene expression analysis. *Immunobiology*, 214(9-10), 683-693. Hamilton, J. A. (2019). GM-CSF in inflammation. *Journal of Experimental Medicine*, 216(10), 2254-2268. Becher, B., & Tugues, S. (2016). GM-CSF: From growth factor to central mediator of tissue inflammation. *Immunity*, 45(5), 963-973. Sonderegger, I., & Strobl, B. (2015). GM-CSF and its receptors in human monocytic cells. *Frontiers in Immunology*, 6, 1-10. Hamilton, J. A., & Achuthan, A. (2013). Colony stimulating factors and myeloid cell biology in health and disease. *Trends in Immunology*, 34(2), 81-89.